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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,437	03/12/2004	Jorg-Reinhardt Kropp	16274.9a.1	6223
22913	7590	07/30/2007		
WORKMAN NYDEGGER (F/K/A WORKMAN NYDEGGER & SEELEY) 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111			EXAMINER CHIEM, DINH D	
			ART UNIT 2883	PAPER NUMBER
			MAIL DATE 07/30/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/799,437	Applicant(s) KROPP, JORG-REINHARDT	
	Examiner Erin D. Chiem	Art Unit 2883	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 and 15-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

This office action is in response to applicant's request for continued examination.

Currently, claims 1-13 and 15-25 are pending.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13, 15, and <sup>18 cbc</sup>~~25~~-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Nosu et al. (US 4, 244, 045).

<sup>ebc</sup> Regarding claims 1-3, ~~18~~-25 Nosu teaches an optical multiplexer and demultiplexer for multiplexing or demultiplexing optical signals having a plurality of wavelengths, the arrangement comprising a multiplex body (Fig. 12; 60 is a monolithic transparent body) having first and second parallel surfaces (60) between which light is reflected back and forth and coupled in or out in a wavelength dependent manner (please follow the arrows designating the directionality of light), a plurality of subassemblies (41-45), each subassembly comprising an optoelectronic transducer (Fig. 9; 131-135 and col. 5, lines 29-31) and an associated optical system that includes a lens (40) aligned at an oblique angle relative to the second surface; and a plurality of wavelength selective filters, each filter being mounted between the second surface and a corresponding subassembly of the plurality of subassemblies (11, 13, 15, 12, 14, 16).

Furthermore, Nosu discloses an optoelectronic transducer supported by the substrate (131, 132,

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133, 134, 135), and an associated optical system that includes a lens attached to the substrate, wherein the lens is unique to the subassembly (122, 123, 124, 125). Regarding claim 3, Nosu teaches each subassembly is mechanically connected to the multiplex body, they are mechanically adhering to the body during manufacturing.

Regarding claims 4-9, Nosu teaches providing means to place the subassemblies at an angular orientation with respect to the second surface of the multiplex body (81-86). These spacers are prisms, which further provide optical functionality to the arrangement. The second surface on which the prisms are place upon are glass plates (31-36).

Regarding claims 10-14, Nosu provided thin film bandpass filters (11-16) placed on glass plates (21-26), these bandpass filters reflects non-centered wavelengths (col. 6, line 67 to col. 7, line 2).

Regarding claim 15, in Fig. 17, Nosu teaches elements 41-46 are graded index rod lens for collimating the optical signals from the fibers.

Regarding claims 18-22, Nosu teaches the subassemblies are structurally identical designed for receptions and transmissions, furthermore, the subassemblies taught by Nosu allows the device to operates as a demultiplexer and a multiplexer due to the bi-directionality of the optical paths.

Regarding claim 3, Nosu teaches each subassembly is mechanically connected to the multiplex body, they are mechanically adhering to the body during manufacturing.

Regarding claims 4-9, Nosu teaches providing means to place the subassemblies at an angular orientation with respect to the second surface of the multiplex body (81-86). These

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spacers are prisms, which further provide optical functionality to the arrangement. The second surface on which the prisms are placed upon are glass plates (31-36).

Regarding claims 10-14, Nosu provided thin film bandpass filters (11-16) placed on glass plates (21-26), these bandpass filters reflect non-centered wavelengths (col. 6, line 67 to col. 7, line 2).

Regarding claim 15, in Fig. 17, Nosu teaches elements 41-46 are graded index rod lens for collimating the optical signals from the fibers.

Regarding claims 18-22, Nosu teaches the subassemblies are structurally identical designed for receptions and transmissions, furthermore, the subassemblies taught by Nosu allow the device to operate as a demultiplexer and a multiplexer due to the bi-directionality of the optical paths.

Regarding claim 24, Nosu teaches an optical multiplexer and demultiplexer for multiplexing or demultiplexing optical signals having a plurality of wavelengths, the arrangement comprising a multiplex body (Fig. 12; 60 is a monolithic transparent body) having first and second parallel surfaces (60) between which light is reflected back and forth and coupled in or out in a wavelength dependent manner (please follow the arrows designating the directionality of light), a plurality of subassemblies (41-45), each subassembly comprising an optoelectronic transducer (Fig. 9; 131-135 and col. 5, lines 29-31) and an associated optical system that includes a lens (40) aligned at an oblique angle relative to the second surface; and a plurality of wavelength selective filters, each filter being mounted between the second surface and a corresponding subassembly of the plurality of subassemblies (11, 13, 15, 12, 14, 16). Each subassembly further including an associated optical system, each associated optical system

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defining an associated second optical axis that is aligned at the oblique angle relative to the second surface, the optical system comprising a lens formed on or in the substrate (41-46).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nosu in view of Sasaki et al. (US 5,960,141).

Nosu teaches a mux/demux mounted on a substrate having a lens mounted to collimate the optical signal in a parallel manner to the receiving member of the mux/demux, having a transducer mounted on each subassembly.

However, Nosu does not teach the electronic transducer is mounted on a leadframe where in each assembly are at least partially encapsulated with a potting compound.

Sasaki discloses a leadframe that provides at least partially encapsulated potting compound to insulate the component mounted thereon (col. 7-8, lines 58-15) for the purpose of maintain an operational temperature for the device.

It would have been obvious at the time the invention to recognize although Nosu does not explicitly disclose a leadframe but since the transducer is disclosed to be mounted on the subassembly, the subassembly inherently further comprises a leadframe to which electrical connections are made for the transducer to operate. Therefore, the teaching of Sasaki is to

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supply the deficiency of a potting compound used to protect the transducers being mounted individually on each subassembly since the teaching of the potting compound applied on top of a transducer to seal the transducer to the substrate can be applied Nosu from overheating and further protecting the mounting of each transducer to each subassembly since once the potting compound dries it forms a clear and hard protective surface over the transducer sealing the transducer between the potting compound and the subassembly.

### ***Response to Arguments***

Applicant's arguments filed May 4, 2007 have been fully considered but they are not persuasive. Examiner provided grounds of rejection in accordance to the amendment of the "lens is unique to the subassembly" with cited figures, column, and line numbers.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin D. Chiem whose telephone number is (571) 272-3102. The examiner can normally be reached on Monday - Thursday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Erin D Chiem  
Examiner  
Art Unit 2883



Frank G. Font  
Supervisory Patent Examiner  
Technology Center 2300